

Mercedes-Benz USA, LLC A Daimler Company

March 13, 2013

SENT VIA CERTIFIED U.S. MAIL

Mr. Ronald Schuyler **EDIR - VERR Coordinator** Certification and Compliance Division U.S. Environmental Protection Agency 2000 Traverwood Dr. Ann Arbor, MI 48105

Dear Mr. Schuyler:

Pursuant to paragraph 85.1903 of Title 40 C.F.R., Mercedes-Benz USA LLC, (MBUSA) on behalf of DaimlerAG (DAG), hereby submits the following updated Emission Defect Information Report:

EDIR\_2011\_5\_a2\_NOx-Sensor\_2013-03-13.doc

Should you have any questions or require additional clarification, please do not hesitate to contact Brian A. Fitzgerald of the Ann Arbor Technology Center at 734-997-2002.

Sincerely,

Thomas Brunner

Department Manager

Vehicle Compliance and Analysis

Stephen Kraitz

Compliance Engineer

Vehicle Compliance and Analysis

**Enclosure** 

# EMISSION DEFECT INFORMATION REPORT IN ACCORDANCE WITH 40 C.F.R. § 85.1903

## <u>AMENDMENT</u>

EDIR-Reference:

NOx-Sensor

Submission Date:

2011-04-14

Amendment(s):

2012-04-10, 2013-03-13

# 1.0 Manufacturer's Corporate Name

Daimler, AG ("DAG") and Mercedes-Benz USA, LLC ("MBUSA")

# 2.0 <u>Description of the Defect:</u>

The majority of claims are in response to MIL activation caused by intermittent electrical faults that are not reproduceable by the dealer or in bench testing by the supplier. The supplier review has concluded that the errors arise only sporadically during certain dynamic driving conditions. The intermittent electrical faults may be associated with the contacts in the sensor as well as to the self-diagnosis in the SCR control unit.

- Part designation:

Lambda probe

- Part number(s):

A 003 542 88 18, A 000 905 30 00, <u>A 000 905 70 00</u>

## 3.0 Description of Each Class of Vehicles Potentially Affected

МҮ	Test Group	MB Vehicle Gode	Transm. Config.	Model	50 State Sales	
2009	9MBXT03.0U2A	W164DE30TC 4x4		ML 320 BLUETEC	3,230	
		V251DE30TC 4x4	L-7	R 320 BLUETEC	357	
	9MBXT03.0U2B	X164DE30TC 4x4		GL 320 BLUETEC	2,401	
Total						

#### 4.1 Number of Vehicles Estimated to be Potentially Affected

Approximately 5,990 vehicles are potentially affected.

Evaluation of related warranty claims and analysis of returned parts indicates that up to approximately 14% of the potentially affected vehicle population may experience a related warranty claim.

# 4.2 Address of Plants at Which Potentially Affected Vehicles Were Produced

Mercedes-Benz Tuscaloosa, AL, USA

# 5.0 Emission and Drivability Impact of Affected Vehicles

Drivability and emissions are not affected by this situation.

There is no impact on emissions resulting from malfunction of the down-stream NOx-sensor, in the event of complete sensor failure, the dosing of the SCR automatically switches from a NOx sensor value to a value based on the NOx exhaust-gas emission level measured before the catalytic converter. The injected AdBlue amount is therefore always calculated based on a modeled value. Thus, the NOx emissions will always be within the normal series test variation, even when the back-up model values are used to calculate the SCR dosing rate.

## 6.0 Emission Data

DAG has conducted emission testing (FTP75) with a MY09 GL-Class (X164DE30TC 4x4) with a mileage of nearly 30,000 miles.

	CO [g/mi]	NOx [g/mi]	NMOG [g/mi]	HCHO [mg/mi]	Particulate [mg/mi]
FUL (50k) certification standards (BIN5)	3.4	0.05	0.075	15	10.0
FUL (120k) certification standards (BIN5)	4.2	0.07	0.090	18	10.0
FTP75 baseline-test + DF (50k)	0.1	0.03	0.010	0.15	2.3
FTP75 baseline-test + DF (120k)	0.2	0.03	0.013	0.25	2.3
FTP75 with unplugged sensor + DF (50k)	0.1	0.04	0.010	0.15	2.0
FTP75 with unplugged sensor + DF (120k)	0.2	0.04	0.013	0.25	2.0

## 7.0 Manufacturer Follow-Up

DAG's supplier changed the body housing of the NOx-sensor (fitting) with model year 2010 to avoid the potential for damage of the contact pads as well as the geometry of the contact elements in MY11 to improve the fixation and the adjustment of the contact pads.

This situation is estimated to affect only up to maximum 14% of the affected vehicles, DAG will continue to monitor this situation in the field. Complaints of customers will be remedied on a fix-as-fail basis during the warranty period.